ARCHITECTURAL CONCRETE

UME TEN NUMBER TWO

Main entrance to auditorium-gymnasium building at Roosevelt Naval Base is from a patio enclosed by arcades. The square pattern of the fenestration i
in the concrete extension of the jamb and head.

(Front cover) The administration building is headquarters for the base and houses the fleet post office and brig. Allied Engineers, Inc., architect and

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.oosevelt Naval Base, Terminal Island

BY ADRIAN WILSON, ARCHITECT*

MERICA'S largest fleet operating base, Roosevelt Naval Base, was planned as a permanent peacetime olishment. Construction had been started before Pearl bor but that "incident" served to enlarge the scope of project and to call for full speed in its completion. In tion to the administration building, recreational fea- s and fleet landing building illustrated with this article, base includes great landing docks, still water landing s protected by inner breakwaters, industrial ware- es and ship repair ities. About a third e base is devoted to inistration and rec- onal facilities which lanned to adequate- andle a large peace- fleet personnel. esigned for lateral s anticipated in an quake area, all ex- r walls are of rein- ed concrete. The lings are supported st-in-place concrete piles tied together by means of reinforced concrete straps or ties. The design for lateral forces was predicated on a seismic factor of 20 per cent gravity, twice the factor commonly used, because the buildings are located on a hydraulic fill constituting man-made Terminal Island.

The architectural character of this base was achieved entirely by giving careful attention to selection and balance of line, form and mass. Ornament was considered both unnecessary and undesirable. The grouping of fenestration was planned to leave wide areas of concrete surface. Windows were made continuous by projecting them beyond the wall surface, allowing a continuous expanse without interruption from columns. The front view of the administration building (*on front cover*) is a good illustration of the balance of the concrete masses and window areas.

The massive central tower of the administration building is focal point of the base. Symbolic of the Navy are the crow's nest and mast. The plain concrete surfaces received no treatment after stripping.

Due to the great rush to complete the project and the shortage of labor, the wall surfaces

ief architect, Allied ineers, Inc., Los Ange- Calif.

The fleet landing building has a wide concourse through the center to facilitate movement of sailors in large groups. Rectangular columns give clearance for buses and automobiles and harmonize with the projecting roofs and

were given no treatment after stripping the forms. Some surface treatment may be applied after the war if it seems desirable at that time. Interior surfaces of outer walls were finished by plastering directly on the concrete without furring, which is a satisfactory practice in this climate.

Both pitched and flat roofs were used. The pitched roofs terminate in wide, horizontally projecting eaves casting deep shadows which give interesting contrasts of dark and light areas. Roof slabs are reinforced concrete, the pitched roofs having a 2-in. layer of vermiculite concrete over the structural slab to serve as insulation and as a nailing medium for the tile. Arcades connecting the various buildings are given much the same treatment with pitched roofs of tile over a concrete slab and wide eaves extending beyond the rectangular supporting columns.

In general, floors and roofs are of beam and slab design. Occasional use was made of rigid frames where long spans were required, such as over the bowling alleys shown in an accompanying illustration. Floor slabs on grade, where of large area, received special attention as to joint layout and crack control. Much of the floor area was colored by treating the surface with chemical stain and was given patterns by means of joints produced by mechanical grinding. Other floor areas were finished with special wearing surfaces. Plain concrete floor finishes were given a chemical hardener treatment.

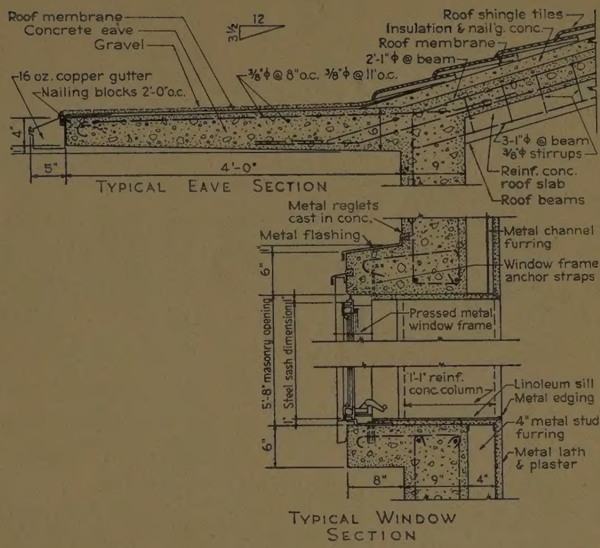
Contraction control joints were provided in the walls at strategic points and located to harmonize with the architectural design. The control joints were formed by V-grooves about ¾ in. deep, formed by attaching strips to both front and back form faces. Where there were abrupt changes in the mass of the buildings and where arcades connected to buildings, joints employing copper dams were used to permit movement without leakage and to prevent earthquake damage.

Focal point of the base is the administration building, with its tall massive central tower surmounted by observation tower, crow's nest and mast. Here are housed the offices of the commandant of the naval operating base and his staff and also the offices of the commanding officer of Roosevelt Base and the small craft training center. The fleet post office and the brig are also located in this building.

Front elevation of the dispensary building. Windows are grouped and project from the wall to give a continuous expanse uninterrupted by columns.

'he fleet landing building facilities include a main wait-
i room, baggage check room, restaurant and officers'
l nge. The building is divided into two sections by a wide
c course through the center to facilitate movement of
s ors in large groups. In normal times it will be possible
f civilians to drive through the concourse to parking areas
a make use of the building's accommodations while
v ting for the fleet personnel to arrive.

our principal buildings connected with arcades and en-
c ing a patio and swimming pool make up the recreational
g up for enlisted men. The auditorium and gymnasium
b lding is 120x190 ft. and has foyer, ticket booths, projec-
t equipment and ventilating equipment, making it a
c nplete unit. A locker room and showers building pro-
t s the pool against wind and serves the pool, gymnasium



and outdoor athletic field. The pool is large enough to permit swimming meets under standard intercollegiate regulations with 11 lanes in 60- or 120-ft. lengths. The third building in this group provides squash and handball courts and a reading room while the fourth building has lounge and fountain rooms, bowling alleys and a game room for billiards and pool.

The officers' recreation building contains large lounge and dining rooms, a grill and fountain bar and facilities

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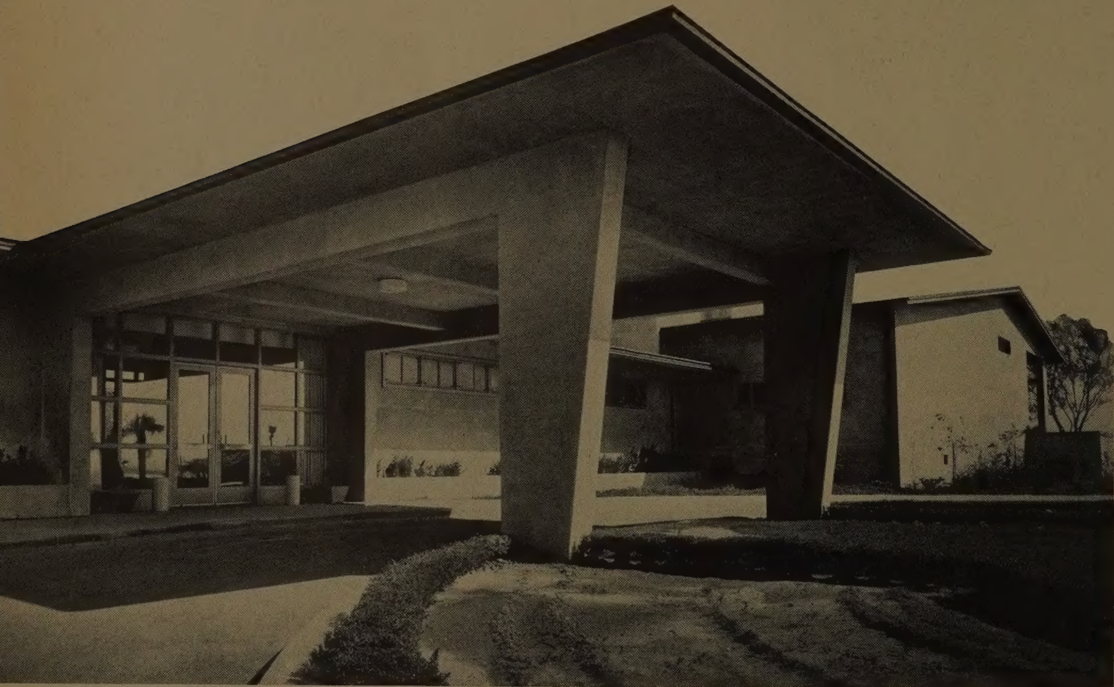
for women guests. Built around a central patio, extra sunlight is secured in some of the main rooms. A feature of this building is the wide lounge and dining terraces facing south and overlooking the waterfront. In this climate these terraces should be useful much of the year.

The dispensary is another of the permanent buildings. It provides for emergency treatments and minor ailments but is not for general hospitalization. The pharmacy, doctors' offices, sick call rooms, ward and solarium, operating room, X-ray room and garage are on the first floor, the second floor containing dental offices and eye, ear and nose treatment rooms.

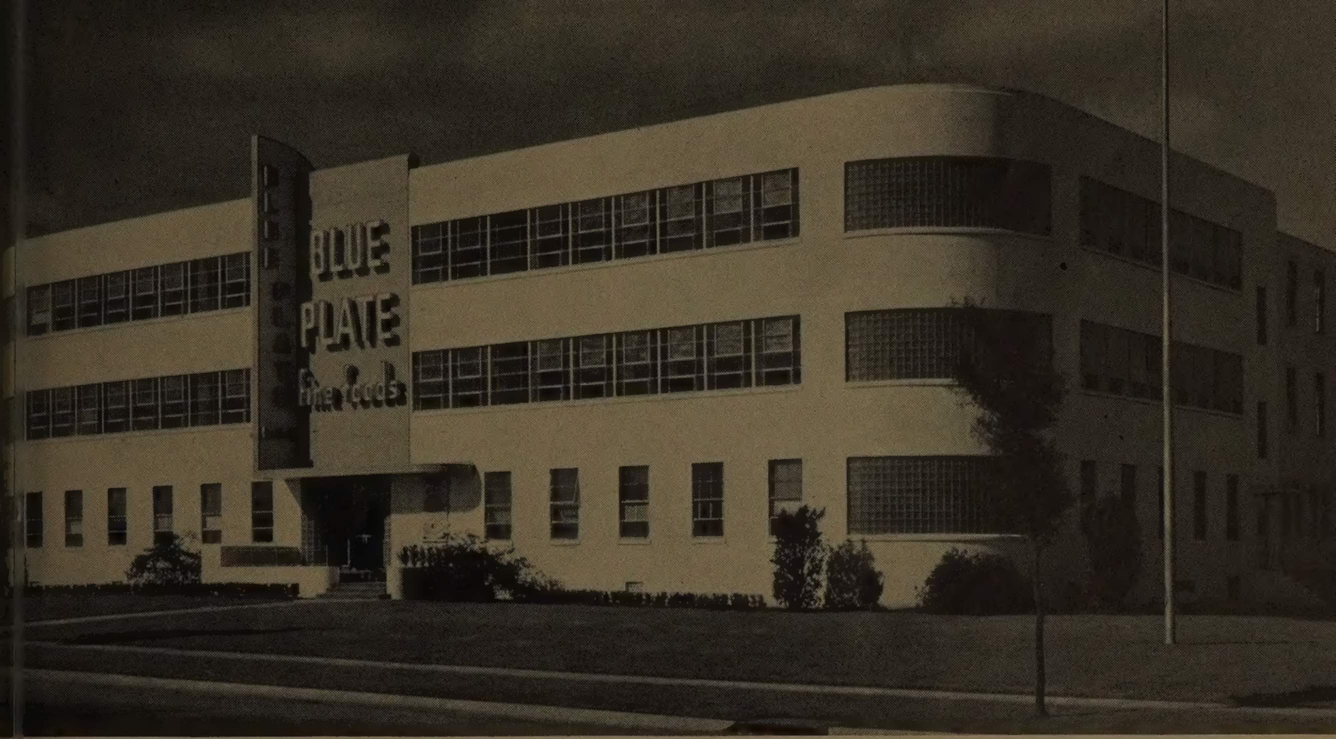
Of interest is the landscaping and the special provisions made for plantings at the bases of some of the larger masses of concrete and at entrances. As shown in the illustrations, the landscaping is only in its initial stage of development. Retaining walls designed as an integral part of the building were used in a number of instances as in front of the a ministration building and at the entrance to the dispensa The canopy at the entrance to the latter building is a det that not only gives protection but is effective in carryi out the horizontal lines of the structure.

The design, plans and construction of this project we under the supervision of the Bureau of Yards & Doc Navy Department, Washington, D.C., Vice Admiral B Moreell, chief of bureau. Captain E. C. Siebert, (CE USN, and Captain John J. Gromfine, (CEC) USN, t present public works officer, were the officers in char of construction. Allied Engineers, Inc., was architect a engineer, with Donald R. Warren, chief engineer, t writer as chief architect, Paul R. Williams, associate arc tect, S. B. Barnes, structural engineer, and E. L. Elli wood, mechanical engineer. Contractors were the Guy Atkinson Co., and the George Pollock Co., of San Francis



The main entrance a cochere of the officers' tion building is sin functional in design.

The officers' recreati ing has dining ter open porch overloo water front and ad siderably to the usef the building. The la dow area is in the m ing room.



simplicity characterizes the design of this new home of Blue Plate Foods, Inc., at New Orleans. August Perez, New Orleans, was the architect.

Plant for Blue Plate Foods, Inc.

By August Perez*, AIA

I PERATIVE need for additional facilities to meet the vergrowing customer demand led to the decision to truct a new building for Blue Plate Foods, Inc. The 1 offices of this company, one of the fastest growing manufacturers in the South, and its parent organiza- the Wesson Oil Co., are in New Orleans, so it was ded to locate the most recent addition to its chain of ufacturing plants in that city. The new building was rovide ample modern office facilities as well as to con- the finest food processing equipment and to provide maximum in sanitary and efficient operation. It was desired that the structure suggest the purity and high ity of the fine foods that bear the Blue Plate label.

fter being commissioned to design and supervise the truction of this building, we reviewed the proposed ansion program, studied production methods and, en- ntering in everyone the enthusiastic desire to create a , streamlined factory, concluded that a modern com- y and its products would best be expressed in modern itectural concrete.

he building is ideally situated on a large boulevard, free from crowding, and dominates the surrounding buildings. The well-kept lawns, wide and green, provide the proper foreground for the off-white finish of the building, while the dignified entrance, with its identifying blue plate insignia, emphasizes to every passer-by and visitor that this is the "Home" of Blue Plate Fine Foods.

Smooth plain wall surfaces of architectural concrete combined with glass block and steel sash fenestration give the appearance of sparkling freshness and cleanliness.

The simple design with continuous windows and rounded corners is balanced by the central vertical mass of blue porcelain and the cream porcelain projecting sign which forms the canopy over the entrance and continues over the parapet wall. The sign was designed as part of the building, and a pleasing effect was achieved by blue letters on a cream background and cream letters on a blue background.

The building is carried on wood piling with reinforced concrete caps. The floors and roof are reinforced concrete flat slab construction with drop panels and square columns and column capitals. This system is particularly economical with heavy loads—250 lb. per sq.ft. live load in this case—and the beamless ceiling affords good lighting and cleanli-

*v Orleans, La.

The blue plate insignia at the entrance emphasizes to every passer-by and visitor that this is the "Home" of Blue Plate Fine Foods.

ness. The plywood forms provided a smooth-finished surface for painting. The plywood was so arranged that the joints between sheets occurred symmetrically on the panels so that any irregularities at the joints make a pleasing pattern.

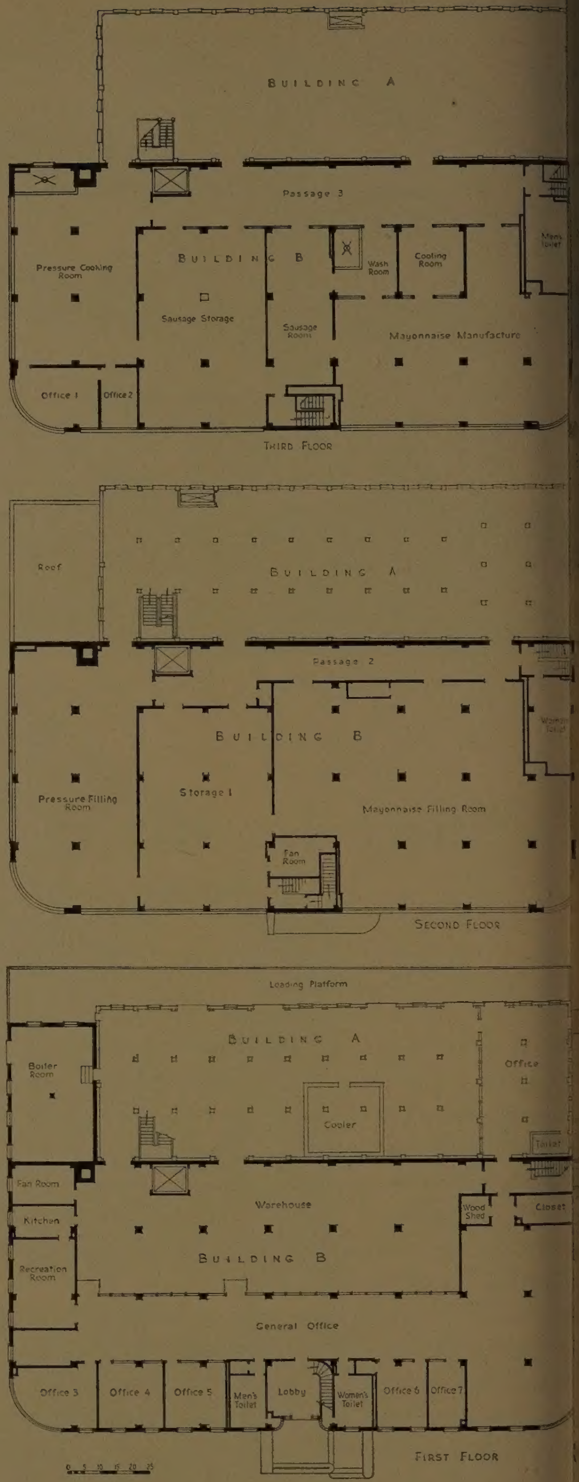
Exposed surfaces of the 9-in. reinforced concrete walls were formed against ⅝-in. waterproofed plywood. Construction joints were made at floor lines, window sills, window heads and roof line. A 1x2 wood strip was temporarily tacked inside the forms at these elevations to insure a level line. The concrete surfaces against the plywood forms were so good that the only finishing required was the removal of small fins which occurred at some joints where the tallow and cement joint filler had not completely filled the joints between abutting plywood panels.

The concrete mix was designed by the water-cement ratio method with laboratory control. Care was exercised to insure thorough but not excessive puddling of the concrete during placing. An internal vibrator was used. Forms were hammered continuously with rubber mallets during placing.

Materials for interior finish were carefully selected to provide the greatest cleanliness with the minimum of labor. The walls are plastered above a 7-ft. high wainscot of smooth-finish ceramic tile. The ceilings are of painted concrete—a most practical finish for this type of building because of the high temperatures and moisture conditions which prevail as a result of steam cooking and processing. The floors, generally, are of 4x4-in. quarry tile.

The large general office located on the first floor has plastered walls, acoustically treated ceilings and asphalt tile flooring. The main entrance has a black terrazzo floor with cream directional lines continuing onto the terrace and entrance steps. The walls of the entrance lobby are of bleached Philippine mahogany.

The assistance and cooperation of Albert Sanchez, general manager of manufacturing for Blue Plate Foods, aide materially in making it a pleasure to design and supervis the construction of this building. Joseph A. Miller of Ne Orleans was consulting structural engineer and Lionel Favret also of New Orleans was general contractor.



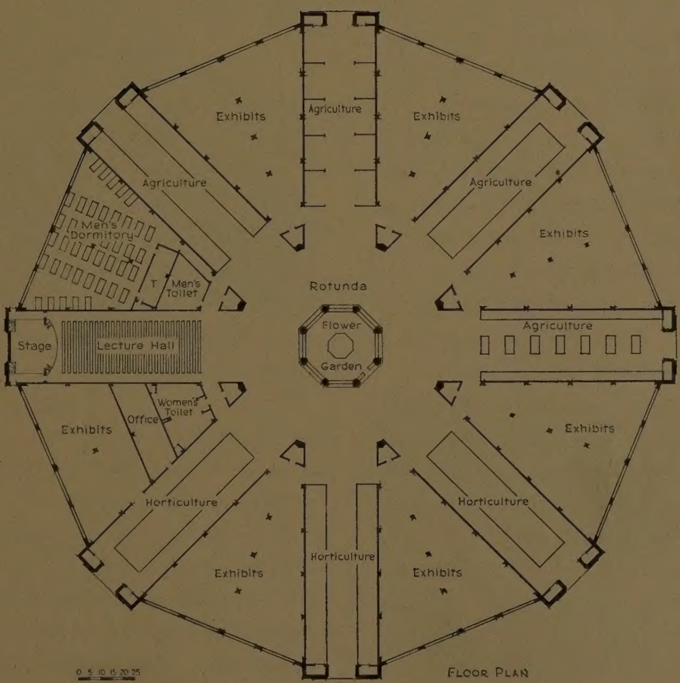
project for the Minnesota State Fair Grounds near St. Paul is the agriculture-horticulture building designed by Wright & MacGregor, architects, of d Minneapolis. It will be an octagonal building consisting of eight exhibit halls surrounding a rotunda. A central tower will rise to a height of 110 ft. ig is designed in architectural concrete to harmonize with other permanent buildings on the fair grounds.

griculture-Horticulture Building, Minnesota State Fair

K. C. WRIGHT*

HE Minnesota State Fair enjoys listinction of being argest permanent osition in the ted States. Its it, covering 250 s, forms a highly loped area conng more than 200 dings, half of them ed by the fair.

long-range proa of buildings and nds development at the eventual



FLOOR PLAN

replacement of all old-type wood buildings with modern fireproof structures. Considerable progress in that direction has been made in the past eight years through the fair's cooperation in federal works programs.

Because of the advantages inherent in architectural concrete in exposition buildings, this type of construction has been adopted as standard for nearly all the newer buildings, and it is represented on the grounds by several

*right & MacGregor, chitects, St. Paul and inneapolis, Minn.

General view of the 4-H Club Building at Minnesota State Fair Grounds. This architectural concrete building serves as a lodging hall for 2,400 girls and boys during fair week. The ground floor houses exhibits and concessions.

exceptionally fine examples. For instance, the horse barn 350 ft. square*, the poultry building 150x300 ft., the arcade 150x300 ft., the three-story 4-H Club Building 150x300 ft.**, the 450-ft. long ramp-bridge to the grandstand—all modern firesafe structures of architectural concrete—stand out among the best of their kind in the nation.

The agriculture-horticulture building is the first in a series comprising the fair's postwar program, which has been developed to provide much-needed new facilities and to furnish a backlog of employment in the reconstruction period. This program will ultimately include seven new structures estimated to cost several million dollars.

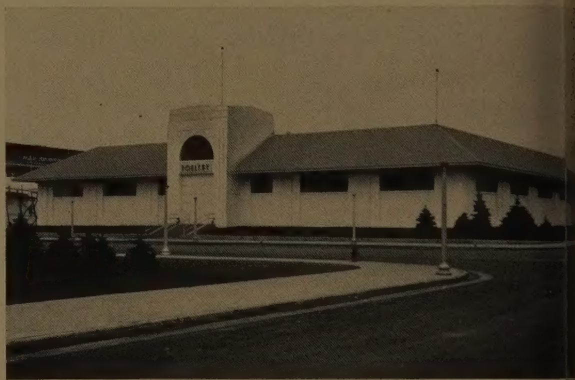
To be the architects for a large exposition requires an extensive study and a knowledge of fair and show business. Fair buildings have peculiar characteristics not found in perennially used commercial structures, and in their design and construction many difficulties are encountered because of their short-time use annually and their unoccupied state during the remainder of the year.

The oldest large building on the Minnesota State Fair Grounds is the agriculture building, which was built in 1885 of wood construction and topped by an immense dome. It has in great measure outlived its usefulness.

The present horticulture building, also of wood construction, and while not as old, is a representative example of the rococo era in exposition building design.

In establishing the design for a combined agriculture-horticulture building two basic plans were considered. The building might lend itself to a single large hall with either a column-supported or a long-span roof, or it might be a combination of units joined in pleasing architectural form that would permit separation of the two kinds of displays, better to emphasize the particular characteristics of each.

*See Architectural Concrete, Vol. 4, No. 1, page 32.
**See Architectural Concrete, Vol. 7, No. 2, page 26.



Firesafety and durability are important requirements of fair [...] like this one where the poultry exhibits are housed.

The first plan was discarded because it seemed too stere[o]typed, and not suitable for the most advantageous displ[ay] of farm and garden products.

The problem then was to develop a plan for a section[al]ized building that would provide not only for the desir[ed] segregation of the exhibits of agriculture from those of hor[ti]culture but would at the same time present a homogene[ous] design. Following lengthy study of all the considerati[ons] involved the latter type plan was decided upon.

Basically, the building will consist of 18 units, each [in] itself an entity, joined together to make an impressi[ve] octagonal structure 300 ft. in diameter. Reference to t[he] plan will indicate the eight exhibition halls, each measu[r]ing 32x100 ft., and each forming an entrance to the rotund[a]. These halls, which have elliptical arched roofs and 28-[ft.] ceilings, are accentuated at the perimeter by headhous[es].

The four halls to the north will be used for the displ[ay] of agricultural products, the three to the south for the sho[w]ing of horticultural products. The eighth will be an asse[m]bly room seating 450 persons, to be used for lectures a[nd] movies upon agrarian topics. The several units are adap[...]

for use as general exhibit spaces, with the displays r in the center or along the walls, or they may be nated variously as "Hall of Corn", "Hall of Small ns", "Hall of Vegetables", "Hall of Flowers", etc., aitting changes of aspect to stimulate public interest. ne eight halls are joined at the rotunda, leaving an l number of triangular areas, which are established as ession spaces facing on the sidewalk around the build- o produce rental income so essential if a fair is to pay ay. These spaces, most of them also open to the inside ie building to permit their use for expanded exhibits need arises, have flat roofs and are of standard beam- column construction with a cantilever projection 12 ft. the sidewalk at the outer perimeter. The openings to paces are equipped at the sidewalk with overhead doors ve access to the concession spaces, and the doors can be d when the concession spaces are used for exhibits ssible from inside the building.

ne rotunda, 88 ft. in diameter, joins the 16 units at center, the eight columns supporting the tower form- a center garden motif. It is not the intention that ays be set in the rotunda, thus leaving it clear for pas- from one exhibition hall to another.

ne tower, an octagon 32 ft. in diameter and 110 ft. , answers three purposes. As the building has no lows opening to the outside, the tower serves as a venti-

ns building is 170x375 ft., has wide canopy to protect booths.

g shaft, with four large suction fans at the top drawing through an ornamental concrete grille at the rotunda ng and exhausting it through four of the eight grilles he top of the tower. The other four grilles will be pped with loud speakers, which will broadcast carillon organ music over the fair grounds during the fair. The t vertical panels are of glass block, from which at night, ugh the use of floodlights, will emanate variegated lighting effects. And it is unnecessary to add that the tower lends height and architectural emphasis to the building.

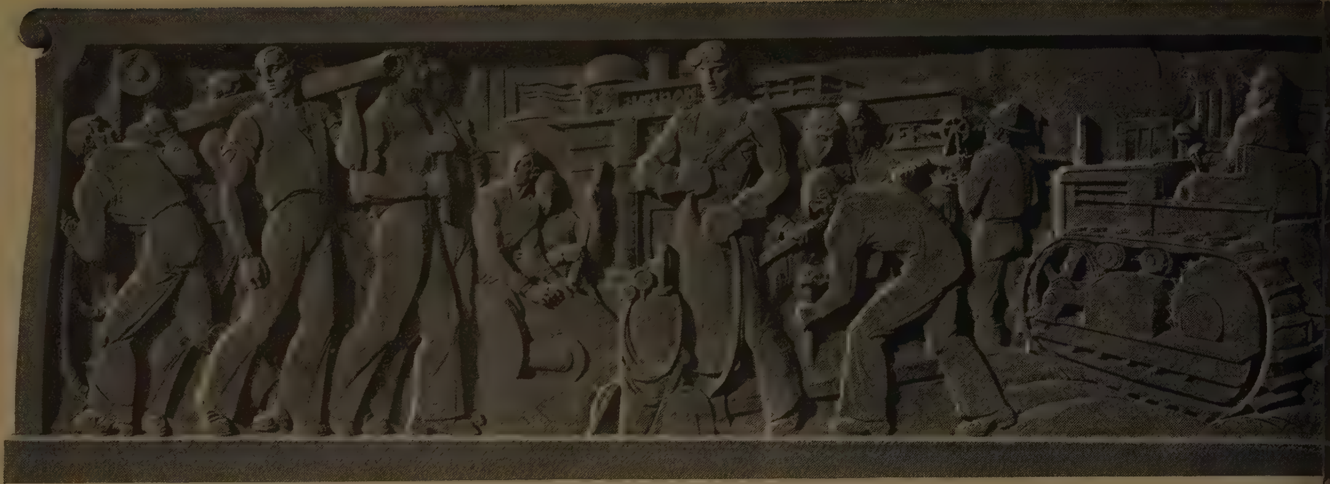
The conception and establishment of the architectural design was comparatively easy after the original determinations were made, but the engineering difficulties have run the gamut of almost every architectural concrete problem in the textbooks. Provisions for expansion and contraction were carefully studied, particularly in view of the wide variations in temperature in Minnesota and the fact that under spring and fall conditions the interior of the building, which is not provided with heat, is much colder than the out-of-doors, making the need for expansion movement a vital part of the design. The final solution contemplates the complete separation of the tower from the rotunda and, in turn, the rotunda from the exhibition halls and the concession spaces. Expansion joints are also provided in the center of each triangular concession space, extending from the rotunda out through the cantilever slabs.

Architectural concrete will form the finished surfaces both inside and outside the building, and after completion these surfaces will be painted with portland cement paint. Plans establishing the details of the formwork are developed in the architectural plans; the specifications are written in minute detail to insure a superior job of concrete work; and, since the design permits a high repetition in the use of formwork, it will allow the construction of most substantial forms, which can be re-used several times.

Architectural ornament will be obtained in three ways—partly by the use of plaster waste molds, partly by the casting of the ornament in advance on the job and its placement after completion of the supporting elements, and, again, by the setting in place, as the building progresses, of the ornamental panels over the entrances, the panels to be made by an art stone manufacturer.

Fortunately it was possible to dedicate a large block of land exclusively for the site of this building, so that its surroundings, landscaping, sidewalks and approaches can be suitably treated to bring out the beauty of the structure, which should prove to be the outstanding building of its type in America.

The horse barn is another of the new group of fair buildings.



Close-up of panel in front of employes' entrance. Panels were cast in place in plaster molds set in the wood forms. Bartholomew Mako was the s

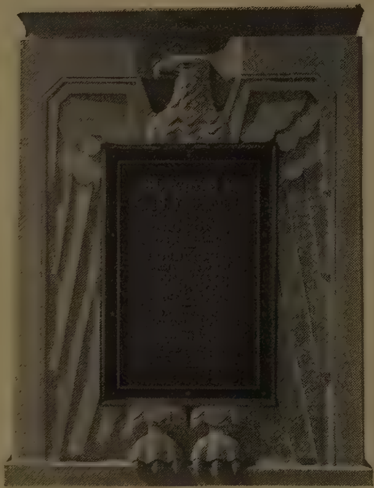
Two City Halls—Modern and Tradition

By W. George Lutzi, Architect*

ARCHITECTURAL concrete is a versatile material equally suitable for many styles of architecture. This was demonstrated by two city halls designed by this office and recently constructed in southern California. Concrete was the most logical choice for the city hall in Burbank which is of modern functional design, yet, in the smaller building at South Gate, concrete has given a refreshingly new attractiveness to the modified Georgian style used.

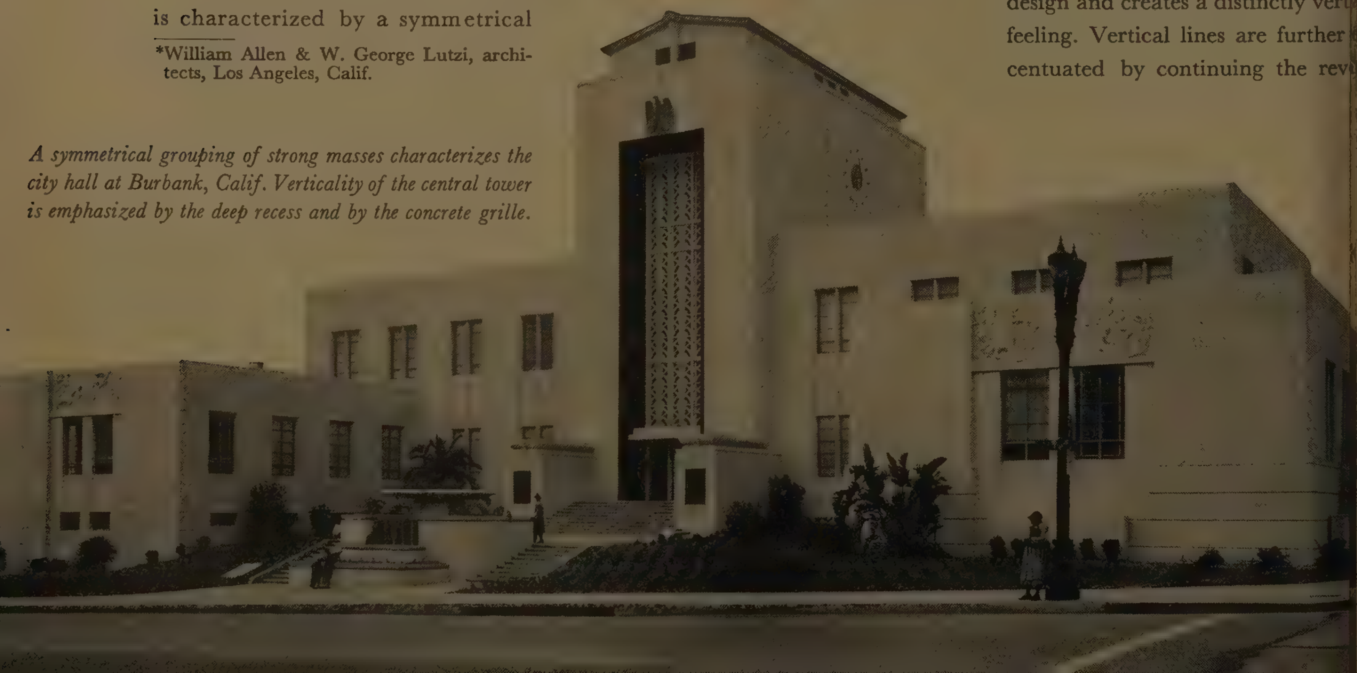
The design of the Burbank City Hall is characterized by a symmetrical

*William Allen & W. George Lutzi, architects, Los Angeles, Calif.



grouping of strong masses. Wall s faces have an interesting texture p duced by lining the forms with wo fiber panels like those used insulation purposes. The concrete finished with a portland cement pa In contrast to these surfaces are sculptured panels over the window the ends of the wings and in fron the side street entrance. These pa were cast integral with the walls plaster waste molds, modeled and ecuted by Bartholomew Mako.

The central tower with its h pierced concrete grille dominates design and creates a distinctly vert feeling. Vertical lines are further centuated by continuing the rev



A symmetrical grouping of strong masses characterizes the city hall at Burbank, Calif. Verticality of the central tower is emphasized by the deep recess and by the concrete grille.

mullions across the spandrels between the first- and ıd-story windows, and in the one-story wings on the ı facade the window reveals are carried down to the level.

ıylight admitted to the lobby and grand stair hall of Burbank building through the concrete grille in the r is subdued yet gives a brilliance to the room which :ther enhanced by the bands of artificial illumination ing a definite part of the architectural treatment. Like xterior, the walls of the lobby and staircase are exposed rete cast in wood-fiber board lined forms and plaster waste molds. The soft quality of the concrete texture imparted by the wood-fiber panels is in interesting contrast to the smooth finish resulting from the plaster waste molds.

The city hall at Burbank was started with Work Projects Administration funds, but construction was carried on by the city and completed with its own funds when the WPA was terminated. It houses all departments of the city. The basement contains a fully equipped emergency hospital with operating room and wards for men and women, also the city jail, a garage for 60 cars, the Civilian Defense Center and a radio control room. On the first floor are the police headquarters, courtroom and courtroom lobby, judge's chambers and court clerk's office, and offices for the city treasurer, city clerk, building and engineering department and street department. The council chambers and administrative offices are on the second floor. Heating and refrigerating equipment is housed in the tower.

The South Gate City Hall is the central feature of the civic center and occupies a generous site with an impressive frontage. The site called for a one-story design and

of water pools provide a ieature at the front entrance. oldings around window openıdepth to the reveals.

es on either side of the buildıcented by sculptured panels. the building is accentuated by ıous horizontal rustications the concrete.

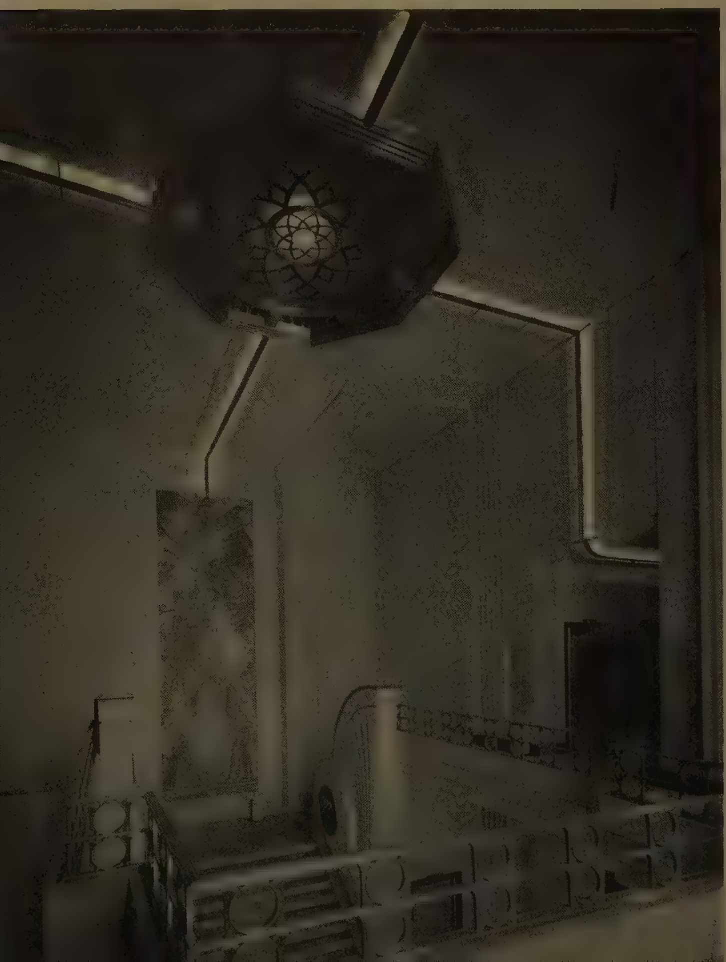
the modified Georgian style of the building harmonizes well with the residential neighborhood.

Central section of the building is 156x60 ft. and the 30x30-ft. wings are set obliquely at either end. Emphasis was given the entrance by a wide approach from the street with concrete retaining walls to provide for a central planting of shrubs and flowers with walks and steps on either side.

In contrast to the massive central tower of the Burbank City Hall, the dominating feature of the South Gate building is the entrance with its molded reveal and finely detailed pediment, all of which is concrete cast in place. A graceful

Panel over windows in the wing to the left of main entrance.

A large mural by Hugo Ballin has been placed opposite the main staircase of the Burbank City Hall. Walls of the lobby and staircase are exposed concrete cast in wood-fiber board lined forms and plaster waste molds.



The city hall at South Gate, Calif., is

cupola befitting this style of architecture surmounts th main section. The texture of the walls is the same as at Bur bank and they were finished with a buff-colored cemen brush coat.

A central corridor connecting with the entrance lobb extends the entire length of this building with offices of th various city officials and departments ranged on either side The floor surface in the lobby is concrete tile and in the cor ridors asphalt tile was used, both finishes being laid ove the concrete structural slab.

Decorative features of both the Burbank and South Gat buildings are the mural paintings placed at strategic point and the wood paneling in many of the rooms. A large mura in the council chamber of the Burbank City Hall extending the full length of the wall over the rostrum depicts "Th Four Freedoms". Others are on the rear wall of the mai stair hall above the stair landing and in back of the judge' bench in the municipal courtroom. These paintings are b Hugo Ballin. In the South Gate building, two large murals painted by Frank Bowers, are on either side of the entranc lobby and depict early historical subjects of the community Black walnut, oak, teakwood and bayott, a hardwood fro the Philippines, have been used for wall paneling.

Campbell Construction Co., Los Angeles, was genera contractor on the South Gate building. The project repre sents an investment of over $150,000 including the furni ture, all of which was designed by the architects. Construc tion work on the Burbank building was done by the cit under the direction of H. I. Stites, city engineer, wit Andrew Raeder, superintendent in charge. Cost of thi building, including furniture, was $450,000.

ied Georgian architecture in harmony with the residential character of the neighborhood.

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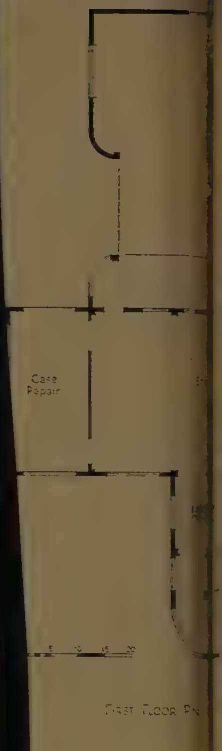
and man-hours of labor. Architectural concrete was the resulting choice made for the new building.

The architectural concrete walls in the basement are 10 in. thick but above they are reduced to 8 in. All walls are reinforced by a single curtain of 3/8-in. bars, placed both horizontally and vertically. Construction joints were located at continuous rustications at the heads and sills of the windows and vertical control joints are centered on the window openings. The smooth surfaces including the spandrels were obtained by casting the concrete in forms made of 3/4-in. plywood. An interesting contrast of surface treatment was obtained by casting the concrete between the windows in forms made of 1x6 rough-sawed boards placed horizontally. The old building and the new third story were surfaced with stucco textured to match the finish of the architectural concrete of the new portion. All exterior wall surfaces were finished with two coats of portland cement paint. The interior finish is plaster on plaster board held free of the wall with furring clips nailed to the concrete.

The new construction, containing a total of 43,500 sq.ft., cost $173,105.

to add interest and tie the elements



C

By Everett D. Woods*, AIA

It would be difficult to convince soldiers and sailors who daily slake their thirst with thousands of gallons of sparkling beverages that making and bottling Coca-Cola is not a vital war industry. Statistics have recently shown that when America's modern war machine pauses in its intensive training, it refreshes with a soft drink, and that a majority of these quenchers are the familiar "coke".

Coca-Cola's popularity has been due to a combination of quality product and brilliant merchandising over a long period. One feature of the merchandising program has been to convince the public of the completely sanitary conditions under which the drinks are made and bottled by inviting people any time to watch the process in various plants around the country. The major design problems in planning the new bottling plant at Covington, Tenn., revolve around this merchandising feature.

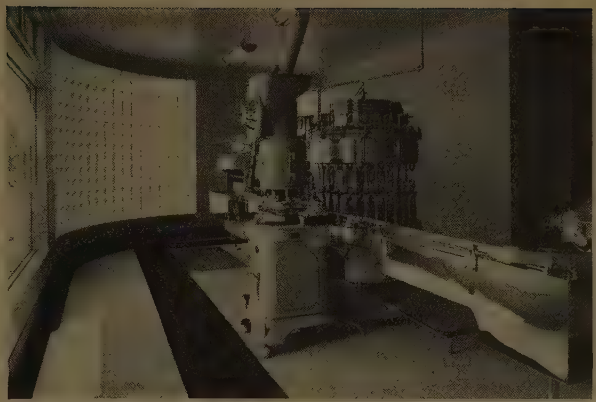
Our problem was to house the bottling equipment so that the spotlessly clean room with its shining machinery would be visible from the outside and from a visitors' gallery. The enclosing wall comprises a large curved area of glass bl and two large areas of plate glass. To produce the cur areas there is no material equal to architectural concr which can be molded to any line.

The shape of the bottling room, located to the left of main entrance as a one-story unit, determined the gene shape of the two-story office portion which rises behind Here the curved wall with glass-block-filled openings is peated as a setback, and rustications in the parapet wal the bottling room are continued around the office portio coincide with heads of first-story windows and sills second-story windows. The same motif is repeated in parapet of the office and warehouse portions of the structu

Floors throughout the building are of concrete slab a beam construction. In the bottling room and some offi the floors are finished with terrazzo. In the bottle washi room, warehouse, and garage the concrete floor was signed for heavy-duty use. It has a steel-trowel finish troweling was delayed until all water sheen had left

*Memphis, Tenn.

Curved concrete walls, large windows and glass block are f Coca-Cola Bottling Co. building at Covington, Tenn. The window to the left of the entrance makes the bottling mac from the outside. Everett D. Woods, Memphis, Tenn., was



The bottling room has a terrazzo floor, tile wainscot and acoustic-treated ceiling. This spotlessly clean plant with its shining machinery attracts many visitors.

a on Display

rface to avoid bringing fine material to the surface, which often the cause of dusting.

The walls of the building were formed against plywood ich was easily bent to produce the curved areas and pro- led a smooth exterior. Walls throughout were finished lightly rubbing on the exterior and by painting, plaster- g or covering with tile on the interior, depending upon e use of the area.

The tall tower was developed simply to provide a background for the sign which at this height dominates the scene both from the north and south of busy U.S. Highway 51. To give the tower an adequate base so far in front of the building, it was made to rise out of an entrance shelter. The opposite wall of the entrance terminates in a curved end of the same shape as the tower.

One unusual feature of this building is a large area on the second floor which is open for public use as a community assembly room. Clubs and societies having no quarters of their own are permitted use of this room at scheduled intervals. Since Covington is a small town without a community house, extensive use is being made of these facilities.

Robert Brown was associated with the writer in the design. The building was erected by B. E. Buffaloe, contractor, of Memphis. Harry Hunter, of Memphis, was engineer.

The Baha'i Temple

)N the shores of Lake Michigan in the beautiful suburb of Wilmette, 14 miles north of Chicago, stands one he most imposing and unusual edifices in America. This he Baha'i House of Worship, better known as Baha'i mple, designed by Louis Jean Bourgeois. It is the second iple of the world-wide religious faith, the first having n constructed in Ishqabad, Russia, early in this century. e faith originated in Persia some 100 years ago, and is ned after Baha'u'llah, a Persian of noble family who d in 1892 at Akka, Palestine, after 40 years of exile and orisonment. His eldest son, Abduil-Baha', came from the ly Land westward, first through Egypt and then to rope and America in 1912 and 1913, speaking in many urches and universities. He laid stress on the principles independent search for truth: the oneness of mankind; abolition of racial, patriotic, political and religious judices; universal peace; the harmony of science and igion; the essential oneness of all religions; the betternt of morals; economic righteousness and justice; unisal education; and the equality of men and women. The mple has been dedicated to these principles and has been ilt by people in all lands who are working for these prinoles. It is open to all religions, sects and peoples.

So unusual in conception and complicated in design was project, the architect did not risk presentation by drawgs alone but at the time designs were being considered the building committee he submitted a beautiful white aster model of the entire structure. H. Van Buren Magone, architect of New York City, upon examination of the odel gave the following description of the temple:

"Mr. Bourgeois has conceived a Temple of Light in iich structure as usually understood is to be concealed, sible support eliminated as far as possible, and the whole bric to take on the airy substance of a dream; it is a lacy ivelope enshrining an idea, the idea of light, a shelter of bweb interposed between earth and sky, struck through id through with light—light which shall partly consume ie forms and make it a thing of faery."

Symbolic of the principles of the Baha'i cause are the ometric forms of the ornamentation covering the columns nd surrounding windows and doors of the temple. Here are ie circle, the triangle, the double triangle or six-pointed ar, the five-pointed star, the Greek cross, the Roman or hristian cross, the swastika cross and the nine-pointed star.

mple, Wilmette, Ill., has exterior of precast and cast-in-place most ornate character. A glistening white, it can be seen stances. Louis Jean Bourgeois, architect.

The figure 9, largest digit, recurs not only in the ornament but in the structure itself.

In designing this structure the architect refused to let himself be bound by common practices. He knew it would be impracticable to use a material that required cutting and carving to give him the pierced and highly ornamented surfaces he visioned and that a material which could be molded such as concrete or metal was especially adapted to such work. The project was built over a period of some 20 years as funds became available. This permitted ample time for investigation of materials proposed for the exterior surface before a decision had to be made. The caissons on which the building is supported were completed in 1921, the basement in 1922. The superstructure was not started until 1930. During this period samples of various materials were placed on the property to test their durability, weathering and discoloration. The architect had met and interested John J. Earley of the Earley Studio, Washington, D.C., in the project and Mr. Earley submitted a full-size sample of the dome ornamentation cast in concrete with a surface of exposed aggregate. It was found that the design with its intricate ornamentation and repetition of forms and details was especially adapted to concrete, plastic when placed and becoming durable and strong upon hardening.

The edifice rests upon a great circular platform which constitutes the basement. The basement wall is 204-ft. 8-in.

The precast concrete tracery of the dome is supported on a steel frame. Backup of all exterior walls and pylons is cast-in-place reinforced concrete. View shows structure before tracery below dome was placed.

outside diameter. A central basement space 72 ft. in diameter and 27 ft. high, free from interior columns and having a domed ceiling, was used for regular services during the years additional funds were being raised and the superstructure was being built. Completely surrounding the building is a series of 18 steps supported on the sloping deck of the basement, The first story of the superstructure is a nine-sided unit, each side constituting an entrance arch buttressed by pylons or towers. The nine symmetrical sides form a series of concave arcs intersecting the line of the circle marked by the towers. Above the main story are the gallery, the clerestory and the dome. The gallery unit, likewise nine-sided, sets back from the main story. It repeats the effect of the entrance arches below in its series of nine window arches, but the nine smaller towers of this level rise at points midway between the lower towers. The clerestory and dome, set back from the outer line of the gallery, form circles and not nonagons but their circumference is divided into nine convex arcs by nine ribs. These spring from the base of the clerestory to meet above the dome and coincide vertically with the towers of the gallery.

The main auditorium is a clear circular opening 72 ft. in diameter and 105 ft. high above the main floor surmounted by the dome 36 ft. in radius. There are no intermediate floors, the galleries circumscribing the open space.

Nine concrete caissons or piers 6 ft. in diameter were sunk to bedrock at 124 ft. Each pier is flared at the top to carry a steel grillage supporting four steel columns which support the dome and also portions of the galleries and first-floor framing. The dome's inner and outer system of framing are independent and not connected in any way, so that unequal expansion and contraction will not affect the structure. The inner framing supports a waterpr dome of wire glass and will eventually support an or mental interior dome. The outside framing supports pierced cast stone exterior dome.

Backup of all exterior walls and pylons is of reinfor concrete cast in place. Due to the unusual shapes involv the curved walls and arches over the windows as well the curved surfaces of the pylons, considerable formwork a complicated nature was required. All forms for the ca in-place backup walls were constructed of wood. At time the walls were constructed it was not known whe would be possible to place the exterior decorative materi The concrete was therefore carefully controlled to wi stand severe weathering indefinitely. Workability was var in relation to the size and shape of members. There columns and mullions from 30 to 47 ft. high, and so sections only 4 in. thick. Increased workability was obtain where necessary by reducing the amount of coarse agg gate. Aggregates and concrete were tested at freque intervals to control their quality. As it turned out th walls were exposed for periods from three years to over years but in no case did they show any effects of weatheri.

The untimely death of the architect occurred about t time construction on the superstructure was started. He ha, however, completed his design including full-sized dra ings of all exterior ornamentation, great drawings of r markable beauty and accuracy, some reaching a length 109 ft. Mr. Earley worked over the architect's designs ornamentation, which were in the flat, and simplified ce tain details as a result of his studies of their final effect depth. The first step was the modeling and carving of t original clay model for each section. The sculptor ma a tracing of the architect's original full-siz drawing for each surface and then transferr this design on to the clay surface. From this ou line he modeled and carved the full-size cl model. Plaster of paris impressions were tak of the clay surfaces and from these a plaster paris model, well reinforced with hemp, ju and steel rods, was made. The plaster mod was then carefully carved to give the fin surface texture and modeling. From the mode plaster of paris molds were made which pr vided the negative of the final cast sectio All precast members were made in a plant Rosslyn, Va.

In the lower section of the dome the preca sections are about 10 ft. square, 5 in. thick an weigh between 3 and 3½ tons each. Near th top of the dome the sections are about 3x10 f Each concrete section is separated from the ac

Close-up of one highly modeled precast concrete unit. Castings were made in plaster molds. The architect provided full-scale drawings of all decorative features.

e · *showing the clean-cut lines of the intricate design. The structure is a nonagon with an entrance in each of the nine sides similar to the two shown.*

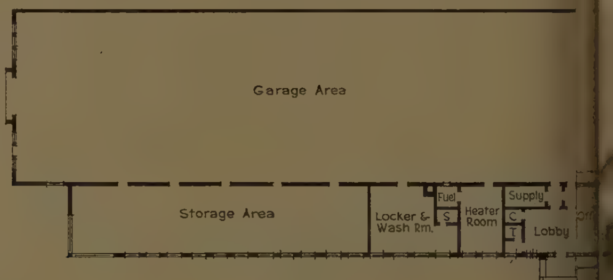
ent sections by ½-in. spaces, allowing room for each to pand, contract and move without affecting the others. hile most of the ornamented facing on the lower stories also precast, some of the plainer surfaces such as around windows and lower sections of the pylons were cast place. Plaster molds were used for these areas also and same materials used for the concrete as in the precast rk. All surface concrete is of the exposed aggregate type oduced by brushing and washing to reveal the aggregate. gregates are white crystalline quartz and a clear transent quartz, crushed and carefully screened and propor-ned to exact grading. White portland cement was used the surface. The surfaces are extremely pleasing and l of life due to the scintillating effect of the quartz.

The final stage was production and erection of the 18 circular steps at the base of the structure. These consist of 918 precast sections and are continuous around the building. A better conception of the amount involved can be had when it is realized that they are equivalent to a single step about two miles long. They were placed on concrete carriages cast on the sloping deck of the basement.

Every operation in the production of the decorative concrete was closely controlled to produce a structure meeting the requirements of the members of the Baha'i faith who look upon their temple as a building which is to last indefinitely. The vision of the architect has materialized and what many technical men had deemed impracticable when they viewed the model in 1920 has become a reality.

Polk County Highway Department office and garage building at Balsam Lake, Wis. E. F. Klingler, Eau Claire, Wis., was the archit

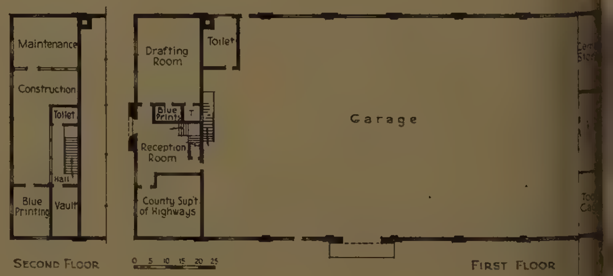
Highway Departments Build Permanent Headquarters



GROUND FLOOR PLAN

Michigan State Highway Department maintenance building Pleasant, Mich., comprises two units, a high-ceilinged garage a ment storage room and a lower unit housing offices. Stewart-King Kalamazoo, Mich., architect and engineer.

CONSTRUCTION, maintenance and operation of a modern highway system must be carried on much as a successful commercial enterprise if the department charged with that responsibility is to render the public efficient, economical service. Many pieces of mechanical equipment are required and these must be regularly serviced and repaired and often rebuilt. Some of this equipment, such as pieces for snow removal, must be stored for long periods, yet must be ready for use on short notice. State and county highway departments have been confronted with the problem of providing adequate housing for their equipment and for suitable facilities for servicing it. Often it has been



Christian County Highway Department office and garage Taylorville, Ill. Russell Dunlap, Quincy, Ill., was the architect.

Sedgwick County highway garage and storage building, near Wichita, Kan. Designed by county engineering staff.

Michigan State Highway Department garage at Frankfort, Mich. Louis A. Kingscott, Kalamazoo, Mich., was the architect.

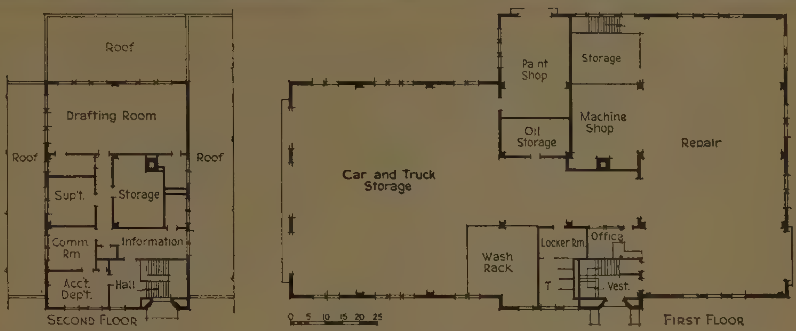
necessary to press several old buildings into service for this purpose.

Office space for the engineering department, superintendent and commissioners is imperative. In many locations it has been possible to provide such space in cities or towns but with the result that the various departments are scattered, making it difficult to operate as an integrated unit.

In recent years some highway departments have constructed headquarters' buildings in which all of their activities can be combined. Generally they are located on the edge of town where large sites can be obtained at relatively low cost and where equipment can be brought in and out with little interference to the normal traffic. It is, of course, highly desirable that such buildings be fire-resistant and require the minimum of maintenance and expense for upkeep. At the same time they should be attractive and ad to the value of adjoining property rather than deprecia it. Many state and county highway departments ha chosen architectural concrete for these buildings. Acco

Garage for Nassau County Road Department, designed by Nassau County Department of Public Works.

s County Highway Department garage at Freeport, Ill.
, ickson, structural engineer, of Rockford, Ill.*

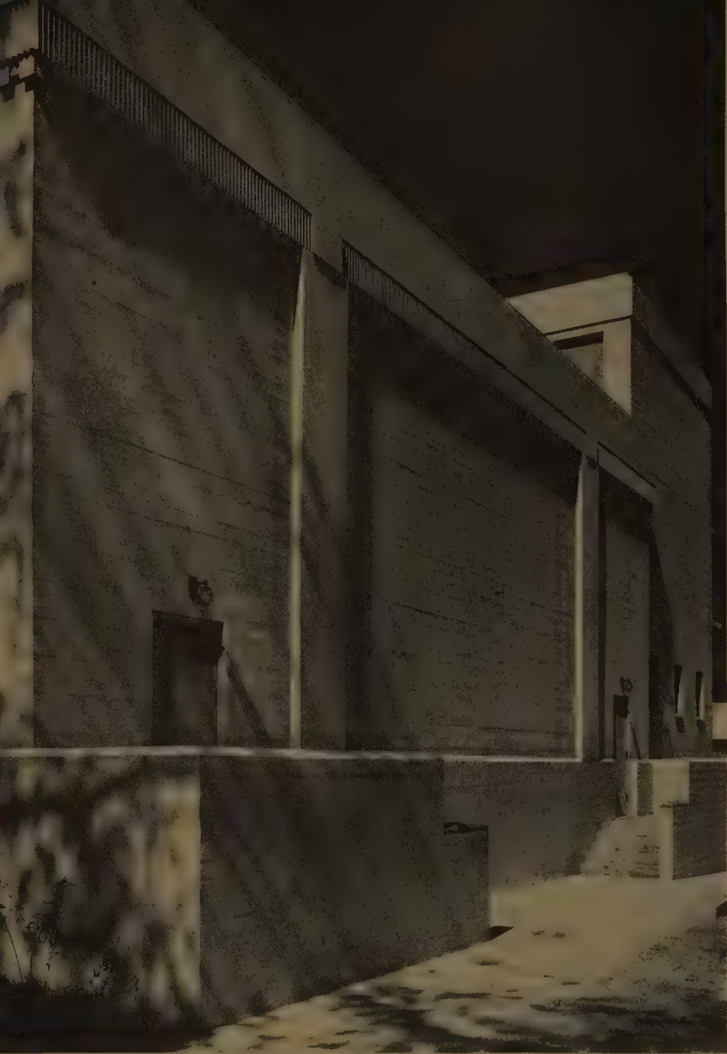


o ying illustrations show a few and indicate that e ı for such utilitarian structures pleasing appear- a : can be had without adding unduly to cost. s shown in the accompanying plans, these b dings generally incorporate a garage for trucks a storage space for other mobile units, also a r air shop and storage for gasoline, oil, tires and r acement parts. Office space is usually provided for a d ting room, for the superintendent and commissioners a often for an auditing department. In two-story build- r the office space is usually on the second floor with the g age, servicing and storage on the first floor.

: is interesting to note the provision for a radio room ı he Kandiyohi County Highway Department building at Willmar, Minn. A two-way radio communication system has been installed, making it possible to communicate between snow plows, service trucks, superintendent's and engineer's cars and the central office.

, aintenance and office building of Kandiyohi County at Willmar, car Newstrom Co., Willmar, Minn., architect and engineer.

Benzonia, Mich., High School Addition



The exterior surface has an interesting texture produced by the wood sheathing of forms. Contrasting smooth surfaces of pilasters and coping were obtained by using plywood forms. Wood forms were used to produce the decorative band.

By Ralph L. Bauer*, AIA

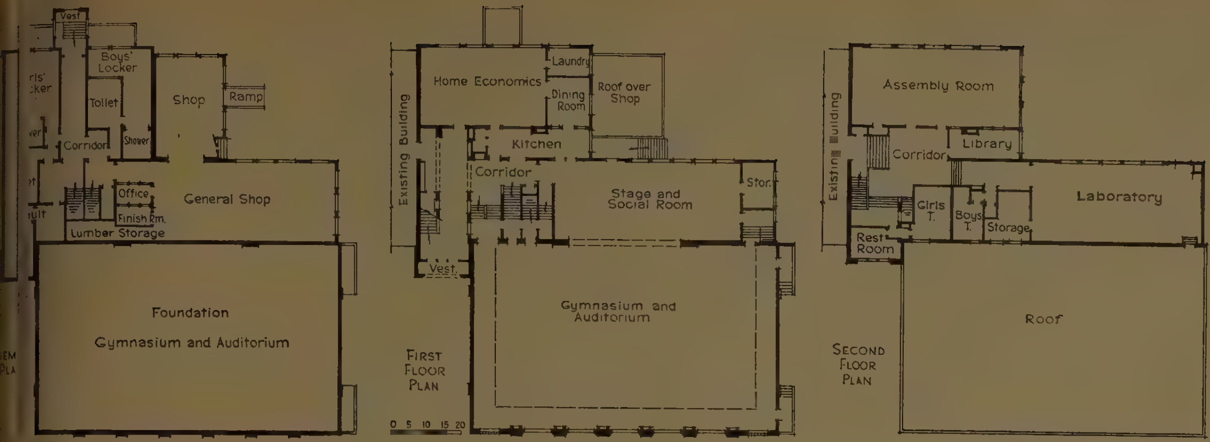
CONSOLIDATION of school districts has brought to the small community of Benzonia, far up toward the northern end of the lower Michigan peninsula, a completely modern, firesafe and attractive high school structure. This was accomplished by additions to the old building.

Plans were originally prepared for a one-story and basement addition to house a combined gymnasium and auditorium with a large stage, dressing rooms and locker rooms, a shop, a physical science laboratory, a domestic science department consisting of kitchen, dining room and laundry, and a separate garage for the school buses. After construction was under way more districts were taken in and it became necessary to alter the plans to provide additional space. A second floor was added to the building to provide for an assembly room, a library, a natural science laboratory, a rest room and additional toilet facilities. A cafeteria arrangement was worked out in the domestic science department so that noonday lunches and large banquets could be served on the stage of the auditorium.

The building contains a total of approximately 400,000 cu.ft., and is of reinforced concrete construction throughout with architectural concrete exterior walls. This selection was made to secure the maximum amount of space with least expenditure of school district funds, to provide good appearance, firesafety and a structure requiring the minimum of maintenance. Construction in reinforced concrete permitted the maximum utilization of native materials. The work was done by the WPA over a period of several years, much of the 2,000 cu.yd. of concrete being placed in the winter months. Work was started in the fall, the garage being built first, and this was then used as the center of operations during construction of the school addition proper. The garage was connected to the heating system, making it possible to heat the sand, gravel and water used in the concrete placed in the cold weather. A shop was

A concrete canopy protects the entrance to the addition. The school name has been cast in the concrete above the second-story window.

*Traverse City, Mich.



...lished in the garage which permitted certain opera... in form construction and other work to be performed ...r cover. None of the concrete was frozen or injured ...y way and the job demonstrated that such work can ...one successfully in all seasons of the year and is well ...ted to our severe northern climate.

...ood sheathing was used for exterior wall surfaces, giv... an interesting texture which appeals to the writer as ...ng character in harmony with the ruggedness of the ...truction but at the same time it has a feeling of refine... t consistent with the purpose of the building. Contrast ... obtained by using plywood forms for pilasters and ...ng, which produced smooth surfaces on these areas.

Features of the exterior are the decorative band over the windows, which is carried around the end walls of the auditorium, and the narrower band at the top of the parapet. The entrance to the addition was made very simple and is protected by an overhanging concrete canopy. The school name is cast in the concrete above the second-floor windows over the entrance. All decorative features in the exterior walls were produced by the use of wood forms.

This building was one of the first architectural concrete jobs in this section of the state and, although built with labor unfamiliar with such construction, the results obtained have been most satisfactory to all concerned with the project.

...ctural concrete addition to the high school building at Benzonia, Mich., provides the community with a completely modern, firesafe and attractive ... Ralph L. Bauer, Traverse City, Mich., was architect.

The simplicity of this desi is en-hanced by the interesting texture pro-duced by the 1x6-in. No. 2 pine boards used for form construction.

Firesafety, durability, low mainten cost and low construction cost were ciding factors in designing the and municipal auditorium at Col Park, Ga. Burge & Stevens were the architects and engineers.

College Park, Ga., Builds Modern School and Auditorium

PRESTON S. STEVENS*, AIA

BACK in 1939 the Fulton County Department of Education was seeking a suitable location for a new school to serve the rapidly growing community of College Park, Ga., a suburb of Atlanta. At the same time the city of College Park decided to build a new civic auditorium and gymnasium in fulfillment of long-cherished hopes.

Fortunately, officials of the city and county were able to purchase a 26-acre tract in College Park owned for many years by Cox College, a women's school which had been discontinued and its building long since abandoned. The city acquired 17 acres and the county nine acres of the tract, a wooded piece of land facing U.S. 29, one of the main highways leading south out of Atlanta.

The school and auditorium-gymnasium were designed as a combined project to be built of architectural concrete. This type of construction was exactly what both Fulton County and College Park officials desired, in that it assured buildings that could be constructed at rock-bottom cost. This was an important consideration, since the county and city budgets called for minimum expenditures. Other factors entering into the selection of concrete were firesafe and durability with low annual maintenance.

Both structures, it should be said, are of purely functional design, with no frills added for architectural effec Yet, the simplicity of construction has resulted in ea case in an exterior appearance that is substantial a pleasing—thoroughly expressive of the contemporary sty

The auditorium-gymnasium was started in 1940 a completed early in 1941 in an elapsed time of 10 mont at a cost of $50,000. Work on the school was begun in t spring of 1941 and finished in the summer of 1943 at cost of $160,000 exclusive of the furnishings.

Walls were formed against 1x6-in. No. 2 pine boar which, when stripped, revealed the surface texture a horizontal joints of the form material. This texture is esp

*Burge & Stevens, architects and engineers.

ci, y pleasing since the shadows cast by the slightly rough su ice lend interest and give a soft, mellow tone to the wi s. Typical wall sections in the school are 10 in. thick, w ½-in. reinforcing bars placed 12 in. on centers vertica and horizontally on both sides. Auditorium walls ar 12 in. thick. Exterior treatment consisted simply of pa ting the walls a limestone buff.

he floors and roof of the school are of concrete joist c truction made with standard removable forms. Parti i walls throughout are of plaster over masonry. All ro ns have sand-finish walls painted pale green, while the c idor walls are of smooth finish in the same shade. The a itorium ceiling is finished with acoustical material.

The auditorium has a seating capacity of 1,500 persons. Although it is owned by the city of College Park, it is used for school athletic contests and other school functions as well as for community gatherings.

An interesting detail is the covered colonnade of architectural concrete, which connects school and auditorium.

The school was completed under the administration of Jere A. Wells, superintendent of the Fulton County Board of Education. Mayor W. E. Sitton and other members of the College Park bond commission cooperated closely with the architects on the auditorium unit of the project. James R. Wilkinson was associated with Burge & Stevens, architects and engineers, all of Atlanta.

wing covered colonnade of concrete nects the school and auditorium.

First Floor Plan

Military Science Building for Ohio State University ROTC

ACCORDING to the Ohio State University policy of long-range campus planning, all new units of building construction take their places as parts of the over-all scheme. The military science building, recently erected for the ROTC artillery unit, was programmed about 20 years ago in conjunction with the development of a new section of the campus in an area surrounding the stadium. The stadium, one of the first major structures of its kind in the Middlewest, is reinforced concrete, and generally speaking future structures in this area, for the sake of harmony of appearance, are planned to be built principally of architectural concrete. One of the projects for future construction in this part of the campus is a large fieldhouse which, according to present plans, will have its exterior walls of architectural concrete.

The military science building was developed as a three-project structure—the three-story center or administrative portion, two two-story wings for classrooms and laboratories, and two one-story wings for storage of materiel. The completed project will be a large U-shaped building with the two- and three-story portions forming the lower crossline of the U and the one-story wings the sides of t U. The space within the hollow of the U will be a d field. At one time it was contemplated that this port would be covered over, but since inside drill on a la scale is no longer a part of the local training program t portion of the project is not now being considered.

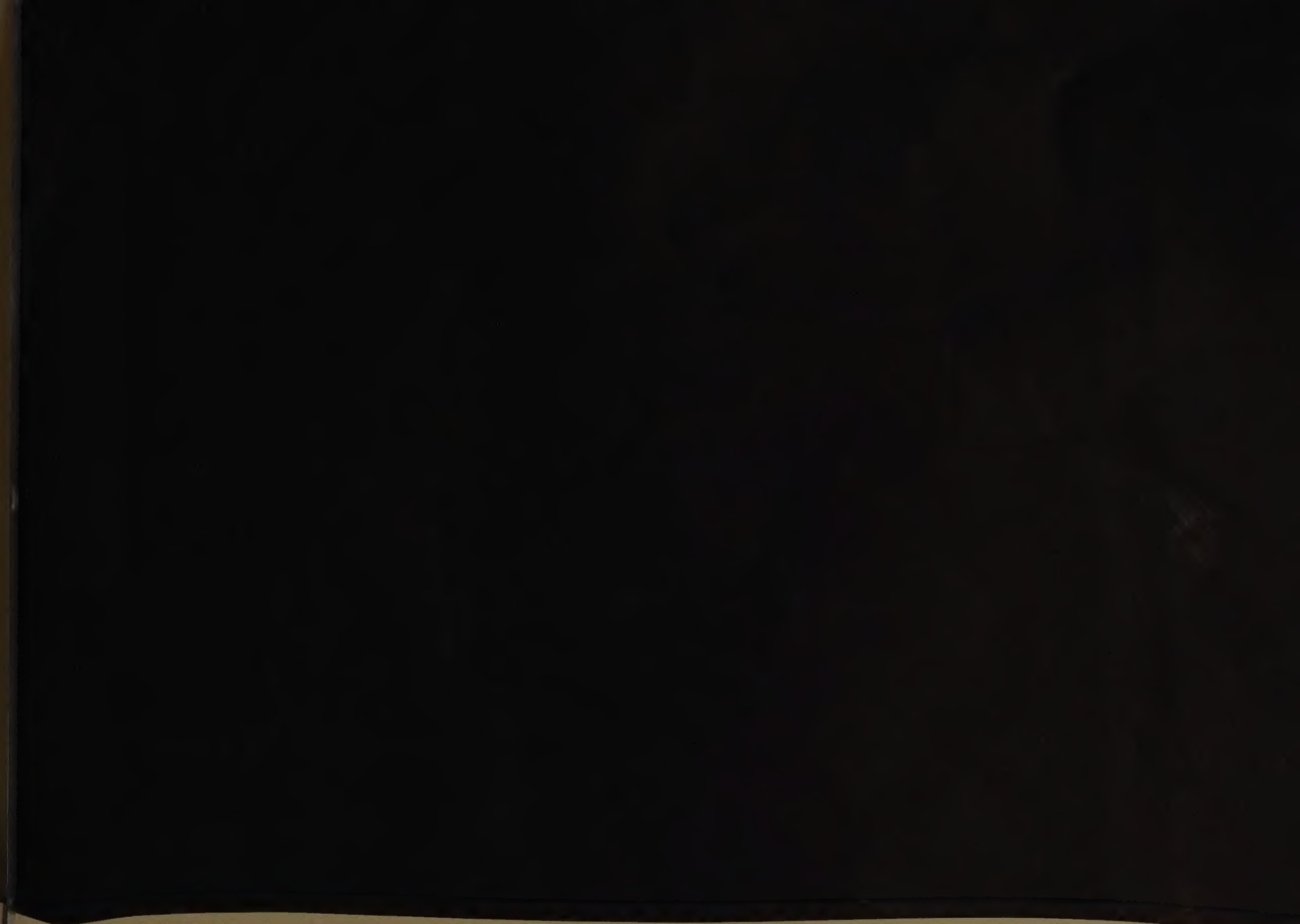
Units thus far completed include the three-story cen portion and one of the two-story wings. The main floor the two-story portion is used as a garage while the en basement area, accessible by a wide door at the end o ramp, is also used for storage of mobile equipment. C umns are spaced so any type of equipment can be park

When construction of the present units was started a

*From an interview with Howard Dwight Smith, AIA, Ohio State University architect.

Interior view of se for storage of mob ment. Concrete floo pan joist type des storage of any piece lery equipment.

A ramp leads to the storage space at the the building. The has been painted buff color.



project it was intended that the entire structure d be of architectural concrete. But by the time two s of the main building and the garage portion of the tory unit were completed the war came and brought te restrictions on the use of reinforcing steel. Since the ional space was essential for the augmented officers' ng program, the structure was completed by using ete masonry for one second-story wing and for the story of the main unit.

mbining board-formed architectural concrete walls masonry walls presented a problem in obtaining uni- ty of appearance which was solved by the use of crete over all the exterior walls. Use of this mate- applied in two spray coats after lightly sandblasting ast-in-place walls, resulted in quite a uniform texture all walls, although the interesting block joint pattern upper walls indicates clearly that these portions are ete masonry. The Colorcreting operation also pro- l excellent waterproofing and an opportunity to con- he color of the building.

ie finished color of the military science building was mined to harmonize with that of the stadium, which ther warm, buff concrete. Since the stadium is the nant structure in the area, it was felt desirable that tellite structures should be subdued in color was well as in size. Accordingly, the military science building finish is slightly less warm in tone. This policy will be followed on future concrete work in the area.

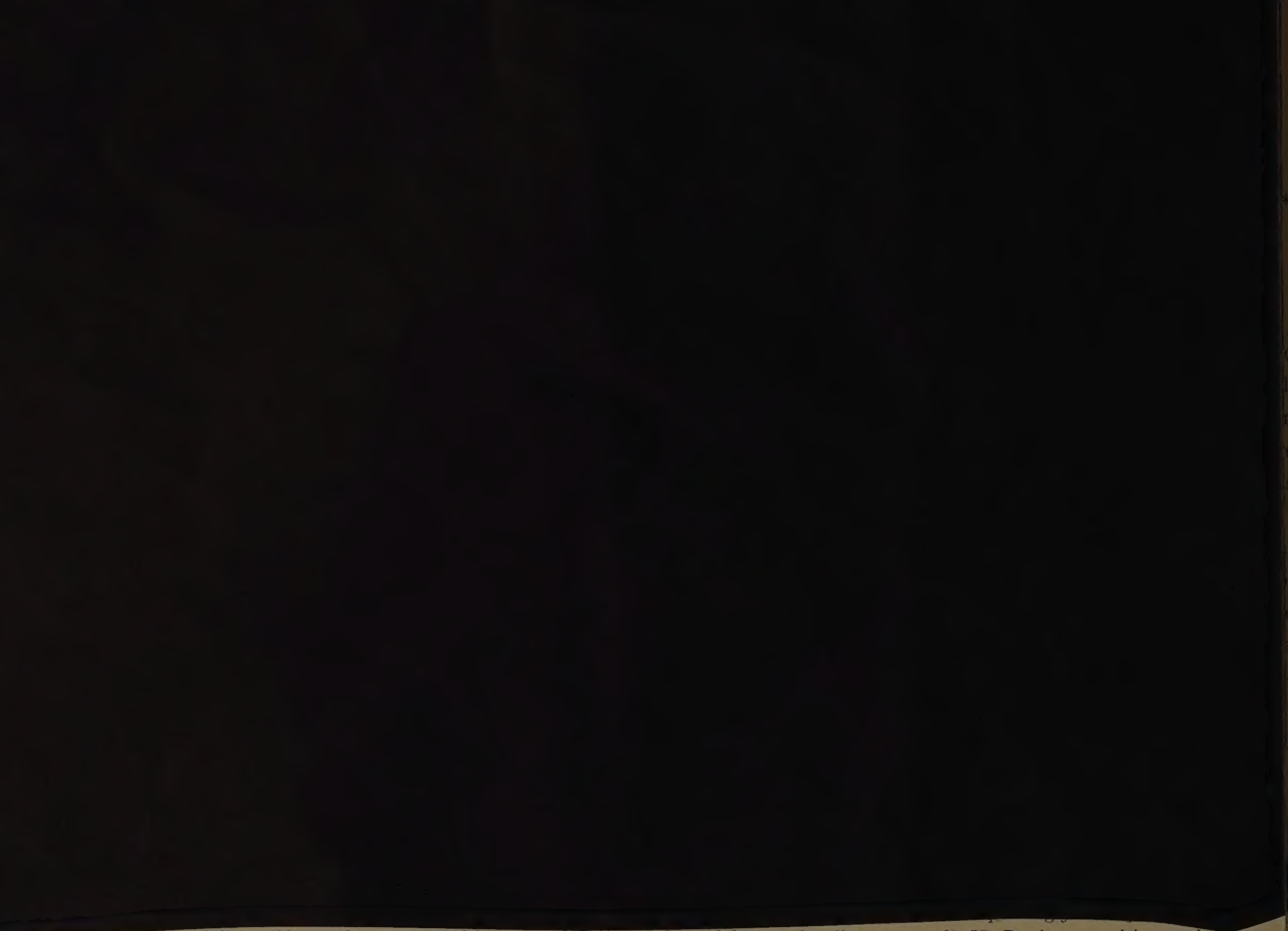
Concrete floors in the structure are of pan joist type of 10- plus 3-in. thickness. The loading permits safe storage of any piece of artillery equipment.

Thus far most of the interior wall surfaces are exposed concrete. As the building is completed by constructing the additions and functions of the various floor areas change (for instance, classrooms becoming administrative offices and garage and storage space being converted to classrooms or shops), the interior walls will be finished to suit their ultimate purposes. This is considered an economical procedure. Further economies are effected by extending heating facilities only to portions of buildings where needed.

Architecturally the building conforms to the simple character of the stadium. Incidental details such as inset panels and lettering backgrounds add a touch of scarlet. The lettering over the main entrance was produced by means of milled wood inserts in the wall forms.

When completed the various parts of the structure will indicate the combined academic and industrial functions which the building serves.

The upper portions were completed in 1943 by G. W. Atkinson & Son, contractors, of Columbus, Ohio.



... and roof are used for parking and are connected by a ramp. Basement is used for merchandise storage. J. H. Davies, consulting engineer.

Off-Street Parking Garages

— a solution for postwar commercial planners

By J. H. Davies*

IN the decade before the war, street parking of automobiles became a major municipal problem. First attempts at control were to limit periods of parking in congested business areas. The next step was to install parking meters. These measures did not add to the parking space, but enforced a more equitable use of it by more people.

During the 30's many old buildings in larger cities were demolished by their owners to reduce taxes on poor revenue investments, and frequently the vacant lots were put to use for off-street parking. But as the 1940 decade came in and still more vehicles every day crowded their way into towns and cities, added measures were recognized as necessary. The initiative in these new measures to provide adequate parking space was taken by commercial establishments.

Department stores, depending upon the "carriage trade" for a large share of their business, began to offer free parking service in off-street commercial lots. But to assure customers of this service many large stores developed a new type of multistory building—a series of open-sided parking lots, piled on top of each other. These skeleton-like structures rose rapidly in the congested areas of Pittsburgh, St. Louis, Milwaukee, Detroit and Washington, built by department stores or combinations of commercial enterprises

*Consulting engineer, Long Beach, Calif.

id located as near as possible to the enterprises they med to serve.

These structures, known variously as "auto parks", hoppers parking service", or "autoports", are economi-lly built and generally employ basement, all floors and of for parking. They do not require completely enclosing alls nor expensive interior finish, and elaborate heating ants are unnecessary. Maintenance is naturally negligible.

Despite their simplicity, these buildings present im-rtant possibilities for architectural improvement of city isiness districts. Their structural and functional forms lend emselves readily to modern design in keeping with the odern machines of transportation temporarily stored thin them.

An example of attractive design for such a structure is iffums' Autoport, erected by Buffums' Department Store Long Beach, Calif. The rear of the parking garage is parated from the main store building by a narrow alley. ie structure is 75x150 ft. in plan and can accommodate 0 cars at a time despite the fact that the basement is not ed for parking. It is four stories high, with the roof being ed as the fifth parking level. The basement, connected th the store by a tunnel under the alley, is used for mer-andise storage.

The four floors and roof are connected by a curving ramp iveway. The ramp from first to second floor is divided by 5-ft. wide passageway to the rear alley, permitting patrons the store to drive in, leave their car for an attendant park, and then walk under the ramp, across the alley the department store without crossing the line of travel either ingoing or outgoing cars.

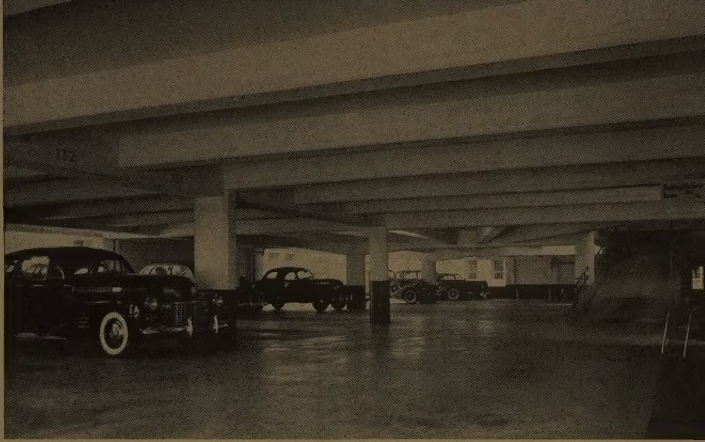
Except for 3-ft. high spandrel walls and occasional con-ete panels required for lateral stability the sides of the ilding were left open. This considerably reduces the cost this type of building without affecting usability.

The structure is entirely of architectural concrete, as ive been the majority of such parking facilities built thus r. Since the floors and ramps in such buildings are built concrete, it is natural that concrete should be used for e structural elements constituting the exterior.

For architectural interest the spandrels are employed as ojected horizontal bands. This gives a pronounced reamlined appearance. Over the main entrance a series three concrete canopies with curved leading edges lends i interesting note and creates a pattern of curved shadows contrast with the straight lines of the building.

Floor framing of Buffums' Autoport consists of long-span ncrete beams and girders. Column spacing is irregular it in general is 22x27 ft.

Plywood forms were used for the smooth panels and andrels and metal pans were employed for all floors



Interior view showing concrete framing and ramp to upper levels. Concrete surfaces have been painted to make the interior light and attractive.

above the second. Cost of the building was $2.40 per sq.ft. complete, including all charges. The building was built by R. E. Campbell, contractor, of Long Beach.

Although limited wartime use of motor vehicles and restrictions on private construction have temporarily stopped erection of such buildings, they are recognized by many as one of the best solutions to the future municipal parking problem. Authorities anticipate that soon after the end of this war there will be more motor vehicles than ever on the streets, and many commercial houses are today wondering how the consequent unparalleled traffic congestion will affect their business.

The building is purely functional in design but attractive. The open design permits parking facilities at low cost and with a minimum of maintenance.